

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1-18 (cancelled)

1 Claim 19 (currently amended): A method for diagnosing a disease in a subject
2 by detecting a plurality of diagnostic markers ~~at least one diagnostic marker~~ of the a disease
3 comprising the steps of:

4 a) ~~providing a substrate for use in desorption spectrometry that comprises~~
5 ~~at least one addressable location, each addressable location comprising an adsorbent attached to~~
6 ~~the substrate wherein the adsorbent resolves at least one of the diagnostic markers under an~~
7 ~~elution condition;~~

8 ba) contacting at least one ~~the~~ adsorbent that is attached to a substrate
9 with a biological sample from the subject to allow the at least one adsorbent to bind the
10 diagnostic markers;

11 eb) washing the at least one adsorbent ~~under the elution condition~~ with at
12 least one eluant to remove unbound material and to allow retention of the diagnostic ~~marker or~~
13 markers by the at least one adsorbent; and

14 dc) detecting retained diagnostic ~~marker or~~ markers by desorption
15 spectrometry; and

16 d) providing a diagnosis based on detection of the plurality of diagnostic
17 markers.

1 20 (currently amended): The method of claim 19, wherein a plurality of
2 adsorbents is attached to at least one substrate, each adsorbent attached in a different addressable

3 ~~location further comprising detecting a plurality of diagnostic markers and the addressable~~
4 ~~locations comprise adsorbents that resolve the plurality of diagnostic markers.~~

21-31 (cancelled)

1 32 (previously presented): The method of claim 19 wherein the disease is
2 selected from cancer, heart disease, autoimmune disease, viral infection, Alzheimer's disease and
3 diabetes.

1 33 (previously presented): The method of claim 19 wherein the biological
2 sample is selected from tissue, blood, urine, stool, lymph, cerebrospinal fluid and interarticular
3 fluid.

1 34 (previously presented): The method of claim 19 wherein the biological
2 sample is derived from a pathological cell.

1 35 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is a hydrophobic adsorbent.

1 36 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is a thiophilic adsorbent.

1 37 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is a normal phase adsorbent.

1 38 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is an anionie exchange adsorbent.

1 39 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is a cationie exchange adsorbent.

1 40 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is a metal ion adsorbent.

1 41 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent is a glycoprotein interaction adsorbent.

1 42 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent comprises a nucleic acid.

1 43 (currently amended): The method of claim 19 wherein at least one the
2 adsorbent comprises a plurality of an antibody or antibodies that bind the diagnostic ~~marker or~~
3 markers.

1 44 (currently amended): The method of claim 43 wherein the antibodies are
2 attached to the substrate at the same addressable location ~~20 further comprising providing a~~
3 ~~diagnosis of the disease based on detection of the diagnostic markers.~~

1 45 (currently amended): The method of claim 43 wherein the diagnostic markers
2 are bound by antibodies at different addressable locations ~~20 wherein the disease is selected from~~
3 ~~cancer, heart disease, autoimmune disease, viral infection, Alzheimer's disease and diabetes.~~

46-56 (cancelled)

1 57 (currently amended): The method of any of claims 19, 20 and 32-45 ~~and 31-~~
2 ~~56~~ wherein the marker or markers comprise a polypeptide.

1 58 (currently amended): The method of any of claims 19, 20 and 32-45 ~~and 31-~~
2 ~~56~~ wherein the marker or marker comprises a nucleic acid.

1 59 (currently amended): The method of any of claims 19, 20 and 32-45 ~~and 31-~~
2 ~~56~~ wherein desorption spectrometry is laser desorption/ionization mass spectrometry.

1 60 (previously presented): The method of claim 57 wherein desorption
2 spectrometry is laser desorption/ionization mass spectrometry.

1 61 (previously presented): The method of claim 58 wherein desorption
2 spectrometry is laser desorption/ionization mass spectrometry.